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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,908	07/12/2002	Makoto Yoneya	220523US0PCT	2995
22850	7590	03/16/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			NGUYEN, HOAN C	
			ART UNIT	PAPER NUMBER

2871

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/070,908	Applicant(s) YONEYA ET AL.	
	Examiner HOAN C. NGUYEN	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-11 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

This application contains embodiments directed to the following patentably distinct species of the claimed invention:

A. The species of First embodiment drawn to a liquid crystal display device with pair of interdigitated electrodes EL1A and EL1B formed on the insulating film IL1 that is formed on to another pair of interdigitated electrodes EL2A and EL2B (figures 1-6).

B. The species of Second embodiment drawn to a liquid crystal display device with pair of interdigitated electrodes EL1A and EL1B wherein switching between two states by use of the single pair of interdigitated electrodes could be effected by use of AC voltage V1 which had an amplitude of 8 vpp and a frequency of 4 kHz and an amplitude of 10 vpp and a frequency of 8 kHz (figures 7-8).

C. The species of Third embodiment drawn to a liquid crystal display device with single pair of interdigitated electrodes EL1A and EL1B and pair of parallel plate electrodes formed on the substrates SUB1 and SUB2 (figure 9).

D. The species of Fourth embodiment drawn to a liquid crystal display device with single pair of interdigitated electrodes EL1A and EL1B, a light reflection plate REF was disposed on a lower surface of the substrate SUB1, and $\lambda/4$ plate QP was disposed on an upper surface of the substrate SUB1 (figure 10).

Species A contains embodiments directed to the following patentably distinct sub-species of the claimed invention:

I. The sub-species drawn to the switching AC voltage V1 of 8 Vpp, and the switching AC voltage V2 of 6 Vpp, wherein a slight degree of drive voltage asymmetry was observed (Figure 4).

II. The sub-species drawn to the switching AC voltage V1 of 5 Vpp, and the switching AC voltage V2 of 4.8 Vpp, wherein the asymmetry between the drive voltages V1 and V2 could be eliminated (Figure 6).

III. The sub-species drawn to the surface of the polyimide film formed on the substrate SUB1 was rubbed by use of buff cloth attached to a rubbing roller along a direction of 45 degrees with respect to the x-axis direction of the coordinate system (FIG. 1).

IV. The sub-species drawn to the surface of the photosensitive film formed on the surface of one substrate as an alignment film was scanned by use of ultraviolet rays, wherein light from the ultraviolet source was converted to linearly polarized ultraviolet light by use of a polarization device utilizing a Brewster angle; and the polarized ultraviolet light was irradiated onto the alignment layer twice via two photomasks having the same square checkerboard pattern.

V. The sub-species drawn to polarized ultraviolet light was radiated twice onto each of the photosensitive films (alignment layers) formed on the two substrates sandwiching the liquid crystal via two photomasks having the same square checkerboard pattern while the intensity of the polarized ultraviolet light was changed

between the first and second irradiation operations, whereby resultant two easy alignment axes of the alignment layer formed an angle of 45 degrees.

VI. The sub-species drawn to linearly polarized ultraviolet light was radiated onto the surface of the photosensitive film formed on the surface of one substrate as an alignment film was scanned by use of ultraviolet rays, three photomasks having a honeycomb pattern as shown in FIG. 11 were used, and the polarized ultraviolet light was radiated onto the alignment layer three times, while the direction of linear polarization was rotated by 60 degrees each time.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims and any drawings readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are

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added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (703) 306-0472.

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October 9, 2003

HOAN C. NGUYEN
Examiner
Art Unit 2871



DUNG T. NGUYEN
PRIMARY EXAMINER